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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,652	01/23/2001	Glenn Ferguson	033048-036	4298
21839	7590	09/12/2006		
BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER FERRIS III, FRED O	
			ART UNIT 2128	PAPER NUMBER

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/766,652	Applicant(s) FERGUSON ET AL.	
	Examiner Fred Ferris	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5,7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. *A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 21 July 2006 has been entered.*

Applicants have now cancelled claims 1, 4, 6, and 9-11. Amended claims 2, 3, 5, 7, and 8 remain pending in this application and now stand rejected based on new grounds for rejection.

Response to Arguments

2. *Applicant's arguments filed 21 July 2006 with respect to claims 2, 3, 5, 7, and 8 have been fully considered but are moot in view of new grounds for rejection. The previous indication of allowable subject matter is hereby withdrawn in view of new prior art discovered during an updated search responsive to applicants' amendment to the claims.*

Claim Interpretation

3. *The claimed invention is disclosed to be a data model for modeling/storing computer network information relating to software, configuration information, monitoring*

information, hardware-information, (DNS) information, network information, and information regarding queues in accessing/maintaining a network. Each of these types of information is referred to as "entities" in the language of the claims. The specific "entities" being modeled in the present invention are all well known network components.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. *Claims 2, 3, 5, 7, and 8 are rejected under 35 U.S.C. 101 because the claimed invention is drawn to non-statutory subject matter.*

Regarding independent claims 2, 3, 5, 7, and 8: The Examiner submits that
claims 2, 3, 5, 7, and 8, as currently written, are merely drawn to nonstatutory descriptive material since claimed "data model" appears to consist only of software program elements (i.e. program per se). In this instance, the claimed "data model" do not appear to impart any functionality as being employed as a computer component. Further, the specification does not appear to set forth that claimed "data model" consists of anything other than simply software elements. Dependent claims inherit this defect.

MPEP 2106 recites the following supporting rational for this reasoning:

"Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data. Both types of

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"descriptive material" are nonstatutory when claimed as descriptive material per se. Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 3, 5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,175,800 issued to Galis et al in view of "Oracle Intelligent Agent User's Guide", Oracle Corporation, Release 8.1.7, PN A85251-01, September 2000 in further view of U.S. Patent 6,834,389 issued to Glass.

Independent claims 2, 3, 5, 7, and 8 include limitations drawn to:

Queue data model for intelligent agents performing network tasks from command list:

- *queue entities representing list of tasks to be performed by agents*
- *queue commands relating queues entities with agent commands/outputs*
- *command output entities representing agent output commands*
- *command entities representing commands to be executed by agents*
- *agent command mutex entities serving for locking agent to single queue*

Regarding claims 2, 3, 5, 7, and 8: Galis disclosing modeling an entire network inclusive of the hardware, software, connectivity (CL5-L4-48) etc. consisting of well known network components, into a configuration data model (database) relating configuration objects to other configuration objects (CL10-L59-63). Galis further sets

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forth expressing configuration objects of a network in a form accessible to other network components (CL-46) where various types of “entities” representing software “roles” to be implemented network device hosts (CL48-16-17, 52, CL11-L41-49). Again, all of the “entities” being modeled are known in the art. Galis further discloses various “commands” to be executed during network configuration.

Galis does not explicitly teach the use of intelligent agents executing commands for performing network tasks.

Oracle discloses intelligent agents for performing network tasks. The use of Intelligent agents is well-known to one of ordinary skill in the art as an autonomous process running in the network for providing supporting database service. For example, an intelligent agent can be programmed (commanded) to be responsible for:

- providing local service, calling OS services, interact with targets*
- accepting jobs (tasks) or events from other applications*
- collecting and queuing results/outputs*
- checking events, queuing event reports*
- canceling jobs or events (tasks)*
- handling network management/protocol*

For example, Oracle discloses the elements of the limitations of the claimed invention as follows:

Oracle discloses the use of intelligent agents in executing commanded network tasks. (Chapters 1: 1-2 to 1-5, 2: 2-2 to 2-23, 3: 3-2 to 3-14) A skilled artisan having

access to the teachings of Oracle and Galis would have knowingly implemented command entities representing commands to be executed by agents.

Galis further does not explicitly disclose locking agents to single queue (agent command mutex). (i.e. prevent agents from accomplishing more than one task at a time, specification: page 106)

Glass discloses the commonly practiced "locking" feature (CL5-L57-59) to keep agents directed to a particular (single) task. Here applicants appear to have merely claimed the well known "lockout" feature commonly used in programming to ensure that only one program at a time has access to a particular resource (See: "lockout", Microsoft Computer Dictionary).

It would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the teachings Galis relating to a network data model relating network objects and entities, with the teachings of Oracle relating to the use of intelligent agents for performing network tasks, and to further modify the teachings of Galis and Oracle with the teachings of relating to entities locking agents to a single queue, to realize the elements of the claimed invention. An obvious motivation exists since, as referenced in the prior art, the use intelligent agents provides a more efficient method of network control and analysis since agents exhibit independent intelligence, mobility and can operate autonomy and varying degrees of commanded constraints. (see Bigus, Background, for example) The examiner further notes that a "queue", is merely a multi-element data structure from which elements can be removed in the same order which they were inserted (Microsoft Computer Dictionary,

1997), and hence, would have been knowingly used by one skilled in the art as an obvious design choice in implementing the queues features of the claimed invention.

Conclusion

6. The prior art made of record not relied upon is considered pertinent to applicant's disclosure, careful consideration should be given prior to applicant's response to this Office Action.

US Patent 6,816,903 issued to Rakoshitz et al teaches intelligent network provisioning and configuration.

US Patent 6,728,748 Mangipudi et al teaches intelligent network provisioning and configuration.

US Patent 6,502,131 issued to Vaid et al teaches intelligent network trafficking, provisioning and configuration.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached at 571-272-2279. The Official Fax Number is: (571) 273 8300

Fred Ferris, Primary Examiner
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Randolph Building, Room 5D19
401 Dulany Street
Alexandria, VA 22313
Phone: (571-272-3778)
Fred.Ferris@uspto.gov
September 7, 2006

A handwritten signature in black ink, appearing to read 'Fred Ferris', with a long horizontal flourish extending to the right.

Fred Ferris
Primary Examiner
TC 2100